CLAIMS:

1. A process for extracting a metal from a refractory material containing the metal, the process comprising fine grinding the material, subjecting the ground material to a leaching step in the presence of an alkaline material and an oxidizing agent, adjusting the leaching step such that the amount of oxidation is between 9%-20%, and subjecting the partially oxidized material to a cyanide extraction step to recover the metal.

2. The process of claim 1, wherein the refractory material comprises a sulphide, a carbonaceous, a pyrite, an arsenopyrite, or a stibnite ore or concentrate.

3. The process of claim 1, wherein the material is ground to a p80 of < 20 microns.

4. The process of claim 1, wherein the alkaline material is selected from lime and limestone.

5. The process of claim 4, wherein the pH of the leaching step is between 5-7.

6. The process of claim 1, wherein the amount of oxidation is between about 9% to about 12%.

7. The process of claim 1, wherein the oxidizing agent is oxygen.

8. The process of claim 1, wherein the leaching step is conducted at a temperature of between 60-95°.

9. The process of claim 1, wherein the leaching step is carried out at 1 atmosphere or less.

10. The process of claim 1, wherein the metal is gold or silver.

11. A process for extracting gold or silver from a refractory material containing gold or silver, the process comprising fine grinding the material to a p80 of < 20 microns, subjecting the ground material to a leaching step in the presence of an alkaline material which comprises lime and/or limestone and an oxidizing agent which comprises oxygen, maintaining the pH of the leaching step between 5-7, maintaining the temperature between 60-85 degrees C, adjusting the leaching step such that the amount of oxidation is between about 9%-about 12%, and subjecting the partially oxidized material to a cyanide extraction step to recover the gold or silver.